

Safety Equipment & Solution

Laser Protection Cabin & PPE



TRUST / Reliable / Masterful

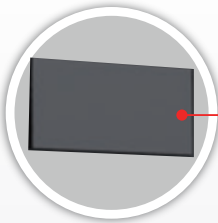
TRM[®]

Laser Protection Cabin

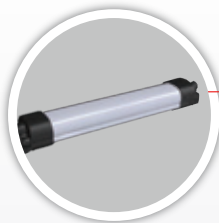
- The laser safety cabin features a modular design for rapid assembly.
- The laser protection wall has been tested and certified by TÜV in accordance with the following standard:
 - EN 60825-4:2006+A1+A2 Safety of laser products-Part 4:Laser guards.
- The cabin can be integrated with the welding machine to provide a safety interlock system, which includes the following features:
 - The laser welding machine shuts off immediately if the door is opened.
 - Access is restricted by a code to prevent entry by unauthorized personnel.
 - External beacon lights provide a visual warning of the laser welding machine's operational status.



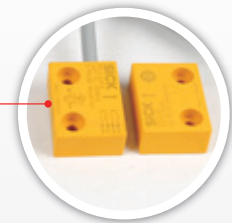
Test Report for passive laser protection walls



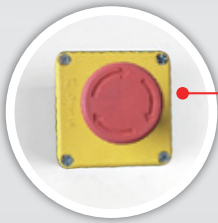
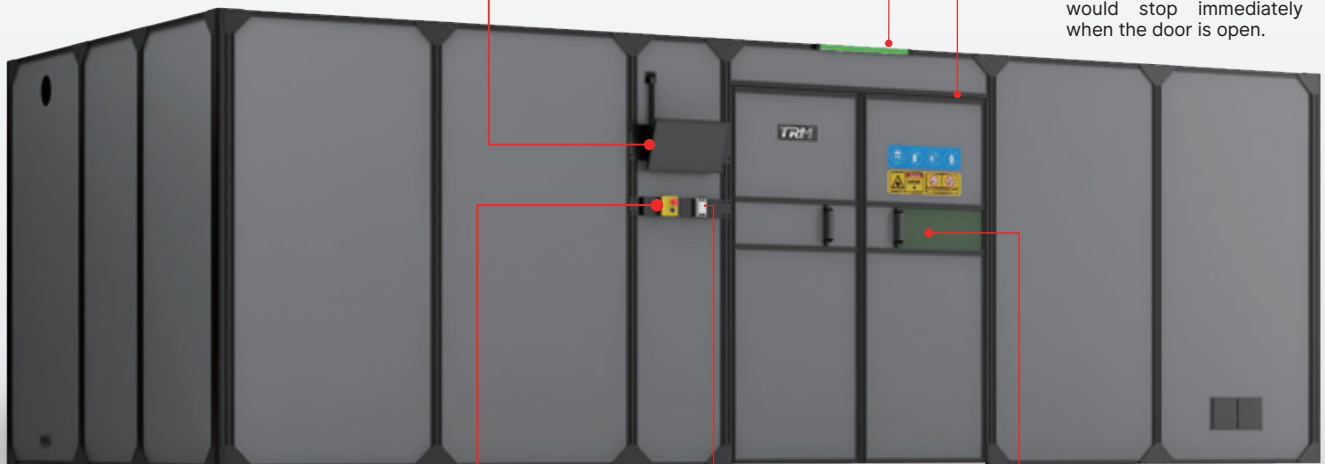
\\ Monitor + Camera (Optional)
Live view of the interior of the protection cabin.



\\ Tri-color Bar Beacon Light
External beacon lights indicate the working status of laser welding machine as a warning sign.



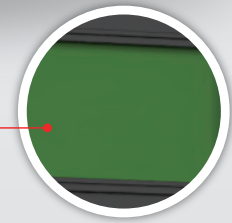
\\ Door Safety Switch
The laser welding machine would stop immediately when the door is open.



\\ Emergency Button
In case of emergency, press this button, to enter the laser protection cabin.

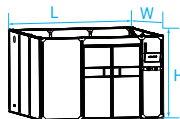
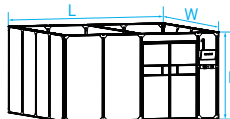
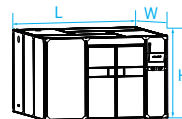
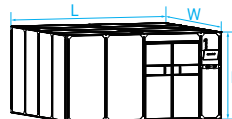


\\ Mechanical Keypad Lock
Unauthorized personnel cannot enter without proper code.



\\ Observation Window
Made of special PC material, it can effectively shield the infrared laser and at the same time inside of laser cabin can be clearly observed.

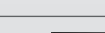
Specifications

Description	Laser Protection Cabin			
Model No.	LPC-8001-00	LPC-8003-00	LPC-8002-00	LPC-8004-00
Roof(Yes/No)	No		Yes	
Size(LxW×H)	 LxWxH(mm): 3600x3600x2400	 LxWxH(mm): 4800x4800x2400	 LxWxH(mm): 3600x3600x2400	 LxWxH(mm): 4800x4800x2400
Protective Laser Wavelength	190-11000nm			
Laser Protection Wall Material	Aluminium composite panel, Thickness 4mm			
Panel Thickness(Frame)	30mm			
Laser Protection Wall Protection Capacity	≥1133kW/m²×100s @1030nm, Diameter 75mm (Test standard DIN EN 60825-4)			
	≥1136kW/m²×71s @1030nm, Diameter 75mm (Test standard DIN EN 60825-4)			
Laser Protection Glass Protection Level	DIRM AB4 CDSO 813-842 DIRM AB5 CDSO 843-865 D AB6+I AB8+R AB6+M AB8Y CDSO 866-1050 D AB5+I AB8+R AB6+M AB8Y CDSO 1051-1100			
Door Size(HxW)	W1.8xH2.14m			
Remarks: 1. The standard laser enclosure does not include a roof; one is available as an optional add-on. 2. Laser cabin dimensions can be customized. 3. On-site assembly is required.				

Configurations

A. Chamber Accessories(Partial)			
No.	Description	Qty	Legend
A-1	Laser Protection Glass (Size:250*600mm)	1	
A-2*	Lighting	Optional	
A-3*	Power Supply Box (European Standard 380V 63A)	Optional	

* Optional

B. Monitoring System			
No.	Description	Qty	Legend
B-1*	Camera	Optional	  
	Network DVR		
	Monitor		
B-2*	Camera(CE)	Optional	   
	Network DVR(CE)		
	2TB Data Hard Drive(CE)		
	Monitor(CE)		

* Optional

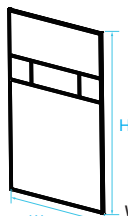
C. Door Lock Control System			
No.	Description	Qty	Legend
C	Power Distribution Cabinet (including aviation plug and cable)	1	
C-1	Safety Door Lock	1	
C-2	Mechanical Keypad Lock	1	
C-3	Emergency Button	1	
C-4	Exit Switch	1	
C-5	Access Controller	1	
C-6	Door Safety Switch	2	
C-7	Proximity Switch Extension Cable	2	
C-8	Tri-color Bar Beacon Light	1	

Laser Protection Wall

- Laser wall is modular design and can be assembled quickly.
- The laser protection wall has been tested and certified by TÜV in accordance with the following standard:
 - EN 60825-4:2006+A1+A2
Safety of laser products-Part 4:Laser guards.
- Its mobile, modular design allows for easy deployment and can be repositioned as needed. It offers a high level of protection, making it suitable for a wide range of high-energy laser applications.

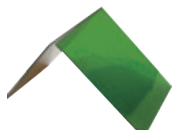


Specifications

Description	Laser Protection Wall	
Model No.	LPC-9622-00	LPC-9621-00(Without window)
Size(W×H)	 W1200xH2000mm	 W1200xH2000mm
Protective Laser Wavelength	190-11000nm	
Laser Protection Wall Material	GD.LSW304 laser protection plate + black aluminum profile frame	
Panel Thickness(Frame)	30mm	
Laser Protection Wall Protection Capacity	≥1133kW/m²×100s @1030nm, Diameter 75mm (Test standard DIN EN 60825-4)	
	≥1136kW/m²×71s @1030nm, Diameter 75mm (Test standard DIN EN 60825-4)	
Remarks: Multiple panels can be connected on-site to form various layouts (e.g., L-shape, U-shape, zigzag) or can be custom-configured to meet specific spatial requirements.		

Configurations

No.	Description	Legend
1	Protective Plate (With window)	
2	Protective Plate (Without window)	

No.	Description	Legend
3	Laser Protection Glass (Size:250*600mm)	
4*	Universal Wheel	

* Optional

Laser Protection Eyewear

- Our products meet and exceed the safety requirements of EU standard EN 207:2017 and is fully CE certified.

Specifications

Order No.	LP-ADY-3-DIN4-33	LP-ADY-3-DIN4-305
Main protection band	900-1100nm	
Material	TR90 Frame, PC Filter	
Applied laser wavelength	1060-1090nm Fiber Laser	
Transmittance	27% of the total amount of the fiber laser	
Optical Density	900-1100nm OD8+	
LB-Rating	900-1100nm D LB6 +IR LB8 LP S CE	
Field of application	High Power Fiber Laser Protection	



CE Certificates



LP-ADY-3-DIN4-33



LP-ADY-3-DIN4-305

Laser Protection Helmet

- It is designed to integrate seamlessly with TRM welding machines, functioning as a critical safety interlock.
- All safety helmets carry the CE mark, guaranteeing full compliance with European Union standards.

Specifications

Order No.	LPH-9301-00	LPH-9101-00
Helmet Shell Material	Nylon	Nylon
Shell Front Plate Material	Carbon Fiber	Carbon Fiber
Filter	Laser Filter	LCD with Laser Filter
Filter Size	114 x 133 x 10mm	114 x 133 x 9mm
View Size	106 x 120mm	100 x 60mm
Shade No.	W2.5	W2.5~5
Low Battery Indicator	-	Yes
Visible Light Transmission	20% (W2.5)	25% (W2.5) 15% (W3) 10% (W3.5) 5% (W4) 2% (W5)
Filter Peak Wavelength Transmittance	W2.5:529nm (>30%)	-
Red Light(650nm) Transmittance	>5%	>15%
Wavelength 900-1000nm	OD6+	OD6+
Wavelength 1000-1080nm	OD7+	OD7+
Laser Protection Filter 900-1080nm	D LB7 IR LB8 CE	D LB7 IR LB8 CE
Protection Shield(carbon)900-1100nm	D LB7 IR LB8 CE	D LB7 IR LB8 CE



CE Certificates



LPH-9301-00



LPH-9101-00

TRM®



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